

STATE
INDOOR AIR QUALITY
ACT
MODEL DRAFT

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MODEL INDOOR AIR QUALITY ACT

SECTION 1. SHORT TITLE.

This act may be cited as the "Indoor Air Quality Act."

SECTION 2. DECLARATION OF POLICY AND INTENT.

The legislature finds and declares:

- (1) Scientific studies and building investigations reveal that poor indoor air quality (IAQ) is responsible for occupant complaints and that of these complaints, the majority are associated with poor ventilation.
- (2) On the average, people spend at least 90 percent of their time indoors, and, as a result, the population has a significant potential for exposure to indoor air quality problems.
- (3) The composition of indoor air may include chemical and biological substances that have been related to illness or discomfort in persons who are exposed to the indoor air.
- (4) Energy saving features and aging, poorly maintained heating, ventilating and air conditioning systems in many buildings have substantially reduced the outdoor air exchange or otherwise contributed to increased concentrations of air pollutants in those structures.

- (5) Existing state environmental and occupational health programs do not adequately protect the public from exposure to poor indoor air quality that may occur in public areas or office workplaces.
- (6) Indoor air quality problems are not easily definable nor are specific health effects easily quantifiable.
- (7) It is in the public interest to reduce exposure to poor indoor air quality by developing a comprehensive program to address the requirements for indoor air quality in public and private buildings, schools, health care facilities, offices and commercial establishments, and to educate the public regarding indoor air quality issues. In so doing, it is in the public interest to pursue an overall, building systems approach to indoor air quality.

SECTION 3. DEFINITIONS.

For the purposes of this Act, the following terms mean:

- (1) "Agency"--the state Occupational Safety and Health Administration.
- (2) "Director"--the state Occupational Safety and Health Administrator;

- (3) "Employer"--any person or entity which employs employees and operates a workplace in this state;
- (4) "HVAC system"--the collective components of the heating, ventilation and air conditioning system for any indoor space;
- (5) "Indoor Workplace"--refers to any enclosed portion of a building utilized as an office or other non-industrial work area.

SECTION 4. OFFICE OF INDOOR AIR QUALITY [OPTIONAL]

(1) There is hereby established within the Agency, an Office of Indoor Air Quality. It shall be the duty of such office to:

- (a) Administer a comprehensive, well-defined and coordinated program designed to reduce the seriousness and extent of indoor air quality problems, and the technological and other methods of reducing human exposure to poor indoor air quality;
- (b) Establish a process whereby the existing authorities will be directed and focused to assure the full and effective application of these authorities to reduce human exposure to poor indoor air quality where appropriate; and
- (c) Authorize activities to assure the general coordination of indoor air quality-related

activity, to provide for investigations or evaluations of indoor air quality in specific buildings, to provide training, education, information, and technical assistance to the public and private sector, and for other purposes.

SECTION 5. PUBLIC INFORMATION PROGRAM. [OPTIONAL]

Subject to available funds, the Director may establish a public information program to educate the public on indoor air quality, and on effective, practical methods for preventing, detecting and correcting the causes of poor indoor air quality.

**SECTION 6. BUILDING INVESTIGATIONS AND SCIENTIFIC STUDIES.
[OPTIONAL]**

Subject to available funds, the Director may conduct building investigations and scientific studies to analyze and quantify the extent of poor indoor air quality in selected buildings with indoor air quality problems. Building investigations shall be conducted in a manner that does not compete with the business of private contractors. Comparative scientific studies may be conducted to look further for the causes of indoor air quality problems, especially where national information on significant potential problems is lacking.

SECTION 7. PUBLIC CERTIFICATION PROGRAM FOR COMPLIANCE. [OPTIONAL]

(1) The Agency shall establish by rule a public certification program for workplaces that consistently meet the

indoor air quality requirements of this act. Any workplace that qualifies for such recognition may display a notice indicating that the building meets or exceeds the requirements of the state's indoor air quality statute.

(2) To qualify for certification under this section, a workplace area shall (a) comply with all applicable provisions of this act; and (b) demonstrate a consistent pattern of compliance in meeting all indoor air quality standards and other requirements of this act.

(3) The Agency by rule may establish a fee to be submitted by the owner or responsible party of a workplace who requests certification under this section. The fee shall be an amount sufficient to pay the Agency's costs in carrying out the provisions of this section.

(4) It may be raised as a defense in a civil action brought for damages for injury caused by the alleged harmful effects of poor indoor air quality that the employer or qualified HVAC system operator complied in good faith, without negligence or misconduct, with the air quality standards established by the Agency, and the ventilation, testing and maintenance requirements adopted under this act.

SECTION 8. HVAC SYSTEMS.

(1) The standards of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE), denominated ASHRAE 55-1981 (Thermal Environmental Conditions for

Human Occupancy) and ASHRAE 62-1989 (Ventilation for Acceptable Indoor Air Quality), are hereby adopted as standards for indoor air quality in all buildings or portions of buildings subject to this act.

(2) Employers shall use all reasonable efforts to maintain and operate HVAC systems during all work shifts to provide adequate ventilation in compliance with the ASHRAE standards adopted in part (1) of this subsection.

(3) Maintenance and Performance Testing.

(a) Employers should identify a qualified person(s) (e.g. contractor, company, agency, or department) to be responsible for the operation and maintenance of the HVAC system and to conduct periodic performance testing. The qualified person(s) identified for these tasks should be knowledgeable in the principles of HVAC system operation and maintenance, HVAC testing procedures, the requirements of the ASHRAE standards and the specific HVAC system serving the building or office.

(b) HVAC system components should be inspected and replaced, cleaned, or calibrated as specified by current design specifications or manufacturer recommendations. These

components include, but are not limited to, filters, drip pans and drainage piping, heating and cooling coils, supply/exhaust vents and louvers, motor belts, humidifiers, air cleaners, and thermostats. Damaged or inoperable components should be replaced or repaired as appropriate. Additionally, any reservoirs or parts of this system with standing water should be checked for microbial growth.

- (c) Inspection and maintenance procedures should be documented by records, logs, or appropriate seals affixed directly to HVAC system components.
- (d) HVAC performance testing should be conducted and repeated at regularly scheduled intervals sufficient to confirm that the ventilation system(s) works as designed, and performance meets specifications under the full range of building operating conditions. Employers should maintain adequate documentation of such testing.

SECTION 9. EVALUATION OF INDOOR AIR QUALITY PROBLEMS.

- (1) Employers shall adopt procedures to document and address indoor air quality problems or complaints from employees or

other building occupants. A written outline of these procedures shall be available to employees, occupants and the Agency.

(2) Following the receipt of complaints about indoor air quality by three or more employees, employers or the person(s) responsible for the maintenance and operation of the building and/or HVAC system, shall evaluate the indoor air problem and take action, if necessary. Such evaluation and action may include an indoor air quality assessment to identify the nature of the indoor air complaints, HVAC system inspection, maintenance, adjustments, cleaning, or other actions deemed appropriate to resolve the problem.

(3) Employers shall provide training to employees concerning indoor air quality and the role of adequate ventilation.

SECTION 10. RETROFITTING NOT REQUIRED.

(1) Nothing in this act shall be interpreted as requiring the retrofit of any buildings subject to this act which are existing with an operating HVAC system or other means of air exchange at the time of enactment of this act, solely to bring into conformity with these adopted standards.

SECTION 11. CONTROLS FOR SPECIFIC CIRCUMSTANCES.

(1) Renovation work, new construction, cleaning operations and pesticide applications that result in the diffusion of dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health shall be safeguarded by means of local ventilation or other protective

devices to insure the safety of employees and the public. Renovation areas in occupied buildings shall be isolated and dust and debris shall be confined to the renovation or construction area. Following completion of construction or renovation work, employers shall ensure that appropriate measures are taken to allow materials to offgas prior to occupancy.

(2) Before use of paints, adhesives, sealants, solvents, or installation of insulation, particle board, plywood, floor coverings, carpet backing, textiles or other materials in the course of renovation or construction, employers or their agents shall check product labels or seek and obtain information from the manufacturers of those products on whether or not they contain volatile organic compounds such as solvents, formaldehyde or isocyanates that could be emitted during regular use. This information shall be used to select products and to determine necessary measures, if any, to be taken to comply with this section.

(3) Direct entry or infiltration of odors, fumes, vehicle exhaust, and other air pollutants through outdoor air intakes; intentional openings in the building shell such as loading docks, stairwells, elevator shafts or other openings; and unintentional openings in the building shell such as around doors, windows, utility entrances, cracks and holes; shall be prevented by engineering controls or architectural design.

(4) Re-entrainment into the building of pollutants from building exhausts, plumbing vents, drain piping, etc. shall be prevented by engineering controls.

(5) Employers shall ensure that the operation and maintenance of equipment, activities, and processes that have the potential to produce indoor air pollutants are being operated and maintained properly.

(6) Employers shall control biological contamination by promptly replacing or properly cleaning porous materials that have been moisture damaged. Visible moss, mold or algae shall not be growing in ductwork, humidifiers or other HVAC system components. Relative humidity should be maintained below 60% in any season to prevent and reduce the growth of biological contaminants.

SECTION 12. PROMULGATION OF REGULATIONS.

The Agency shall promulgate regulations necessary to carry out the provisions of this act including regulations regarding inspections conducted pursuant to the Act.

SECTION 13. EMERGENCY POWERS.

The director, upon determination that a serious indoor air quality problem exists in a workplace with significant IAQ effects impacting upon at least half of the employees thereof may order any such site to be closed by way of the issuance of a cease and desist order enforceable in the appropriate courts of the state.

SECTION 14. SEVERABILITY.

If any provision, clause or paragraph of this act shall be held invalid by a court of competent jurisdiction, such validity shall not affect the other provisions of the act.

SECTION 15. PREEMPTION.

This act preempts a county, city, town or other governmental unit within the state from adopting any ordinance or regulation concerning indoor air quality, in workplaces covered by this Act.

SECTION 16. EFFECTIVE DATE.

This act shall take effect one year after it shall have become law.